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Schrödinger's Publications in "Annalen der Physik". With 1 Figure 45 (1988) 21.

Facsimile letter of Prof. Hund. 45 (1988) 23.

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Obituary to Dr. phil. Bernhard Kockel. SCHEID, W. 45 (1988) 1.

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To the Death of Klaus Fuchs. TREDER, H.-J. 45 (1988) 257.

To the 100th Birthday of Gustav Hertz. With 1 Figure. WALCHER, W. 45 (1988) 3.

Note for the termination of the 500, volume of the whole series of the journal "Annalen der Physik". Wiecke, K. 45 (1988) 634.

Cosmology

Black Holes and Inflation. González-Díaz, P. F. 45 (1988) 265.

A Singularity-Free Cosmological Model with a Scalar Field as Source. Gottlöber, S. 45 (1988) 452.

Galactic Magnetic Field and Cosmic Quantum Mechanics. Massa, C. 45 (1988) 391.

Magnetic Fields Generated by Neutral Masses. Massa, C. 45 (1988) 512.

To Test the Generalized Gravi-Magnetic Hypothesis by the Earth + Moon System. Massa, C. 45 (1988) 515.

Schuster's Law, Black Holes and Gravitational Collapse. Massa, C. 45 (1988) 518.

Anomaly in Standard Cosmology. With 2 Figures. Mészáros, M. and P. Molnár. 45 (1988) 155.

Does Cosmos Really Have a Fast Rotation? Soleng, H. H. 45 (1988) 507.

Coulomb Systems

Pade-Approximations for the Electron Gas and for Symmetrical Plasmas. With 5 Figures. Ebeling, W. and H. Lehmann. 45 (1988) 529.

Thermodynamics Function, Ionization Equilibrium and Phase Transitions in Coulomb Systems With 7 Figures, Kraeff, W. K., W. Ebeling, K. Kremp and G. Röpke. 45 (1988) 429.

The Concept of Energy Densities and Stress Fields and its Applications in Quantum Mechanical Coulomb Systems within the Born-Oppenheimer Approximation. ZIESCHE, P. 45 (1988) 626.

Elementary Particles

Photo- and Electro-Production of a New Light Boson. With 3 Figures. Kim, D. Y., M. S. Zahir and S. R. Valluri. 45 (1988) 457.

Hadronic Interactions in the Energy Region of Future Hadron Coliders, Dual Topological Unitarization of Hard and Soft Hadronic Cross Sections. With 4 Figures. Ranff, J. 45 (1988) 551.

Can We See SPT Interaction in Coherent Pion Production? With 3 Figures. Rein, D. 45 (1988) 303.

General Physics

On the Origin of the Radiation Pressure of Sound Waves. With 4 Figures. RICHTER, G. 45 (1988) 6.

General Relativity

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Equations of Motion for Test Particles with Internal Structure in Gravitational and Gauge Fields. Fuchs, H. 45 (1988) 455.

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- Classical Elementary Particle Models Based on the Dualistic Approach. Mahanta, M. N. 45 (1988)
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- On the Einstein-Schrödinger Field Equations with Matter. TREDER, H.-J. 45 (1988) 47.
- The Galielei-group as a Subgroup of the Einstein-group. TREDER, H.-J. 45 (1988) 151.
- Uncertainty Principle and Quantum Fluctuation of Gravitation. TREDER, H.-J. 45 (1988) 311.

History and Philosophy of Science

- Schrödinger's Interpretation of ψ as a Continuous Charge Distribution. Barut, A. O. 45 (1988) 31. Heisenberg's Cut and the Limitations of its Movability. v. Borzeszkowski, H.-H., and R. Wahsner 45 (1988) 522.
- The Formalism of Quantum Theory: An Objective Description of Reality? DIEKS, D. 45 (1988) 174.
- On Schrödinger's Search for a Stochastic Interpretation of Quantum Mechanics. Marić, Z. 45 (1988) 205.
- On the Significance of the Bell Inequalities for the Locality Problem in Different Realistic Interpretations of Quantum Mechanics. DE MUYNCK, W. M., and J. T. VAN STEKELENBORG. 45 (1988) 222.
- Demokrit Planck. Rompe, R., and H.-J. Treder. 45 (1988) 37.
- Our Greek Inheritance. Schöff, H.-G. 45 (1988) 249.
- On the History of Bohr-Sommerfeld Quantum Theory. Schöff, H.-G. 45 (1988) 595.
- Schrödinger's Cat and Wigner's Friend (about the Mobility of the Heisenberg Cut). TREDER, H.-J. 45 (1988) 255.
- Einstein's Materialism and Modern Tests of Quantum Mechanics. VIGGER, J. P. 45 (1988) 61.
- Demokrit and Quantum Mechanics. WAHSNER, R. 45 (1988) 53.

Laser Physics

- Method for Accurate Determination of the Reflectivity of Laser Mirrors in an Optical Cavity. With 4 Figures. Fiedler, R., G. Schirmer, D. Schubert and H.-G. Walther. 45 (1988) 469.
- A Theoretical Study on Irregular Emission Properties in Lasers Coupled to a Long External Resonator. With 8 Figures. Müller, R., and P. Glas. 45 (1988) 137.
- On Some Solutions of Relativistic Wave Equations. Ternov, I. M., A. M. Khapaev and I. V. Ponomaryov. 45 (1988) 278.

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- Multi Soliton Solution for Langmuir Ion-Acoustic System in an Arbitrary Background. Chow-Dhuby, A. R., and G. Mahato. 45 (1988) 383.
- Generalized Heat Kernel Method with Local Mass Scale. REINHARDT, H. 45 (1988) 367.

Nuclear Physics

- Sum Rules in the Quark Model. ABBAS, A. 45 (1988) 292.
- A Comparative Study of Proton-Emulsion and Heavy-Ion-Emulsion Interactions at 4.5 GeV/e per Nucleon. With 5 Figures. Ghosh, D., R. Sengupta, A. Ghosh, A. Mukhopadhyay and J. Roy. 45 (1988) 353.
- Four Momentum Transfer between the Fireballs in Carbon-Emulsion Interaction at 4.5 GeV/e per Nucleon. With 3 Figures. Ghosh, D., R. Sengupta and J. Roy. 45 (1988) 362.
- On the Relation between Effective Potentials and Realistic Potentials. Hassan, M. Y. M., G. M. Al-Halmoushi and S. Moharram. 45 (1988) 285.
- New Converging Collimator for Cold Neutrons Time-Of-Flight Measurements. With 3 Fgiures. Naguib, K. O. H., Sallam and M. Salama. 45 (1988) 399.
- Bound Three Alpha Particles Model for the ¹²C Nucleus as a Three-Body Problem. With 2 Figures. Osman, A., and M. Y. H. Farag. 45 (1988) 331.
- Coulomb Forces in Three Charged Particles Interacting via Stripping Nuclear Reactions. With 1 Figure. OSMAN, A. 45 (1988) 379.
- Rearrangement Collisions between Four Identical Particles as a Four-Body Problem. Osman, A. 45 (1988) 409.
- Polarizations of Scattered Protons Using a Generalized Skyrme Force. Osman, A. 45 (1988) 509.
- Angular Gamma Dose Rate Distribution at the Surface of Injected Ducted Concrete Shield. With 4 Figures. SAYED AHMED, F. M., and A. ABBOUD. 45 (1988) 117.
- Fast Neutron Albedo Calculations for a Concrete Shield with Different Curvatures. With 4 Figures. Sayed Ahemd, F. M., and M. Salama. 45 (1988) 271.
- Radial Calculations of Core Gamma Doses for BWR Reactor Using Cygas Gamma Attenuation Code. With 1 Figure. Saved Armed, F. M. 45 (1988) 389.
- Gamma Dose Distribution Studies in Ducted Shield Material Having Different Configurations. With 6 Figures. Sayed Ahmed, F. M. 45 (1988) 443.
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- On Interference and Intensity-Correlations of Light Beams of Very Low Intensity. RICHTER, G. 45 (1988) 564.

Photon Emission and Adsorption

Electric Dipole Oscillator Strength and Radiative Lifetimes in the Magnesium Isoelectronic Sequence. With 2 Figures. EL-Sherbini, Th. M., H. M. M. Mansour, A. A. Farag and A. A. Rahman. 45 (1988) 498.

Quantum Chromodynamies

- Introduction of Anomalous Green Functions into Quantum Chromodynamics. Herrmann, J. 45 (1988) 421.
- On the Semiclassical Quantization of the Chiral Soliton. Reinhardt, H. 45 (1988) 372.

Quantum Field Theory

- Klein Gordon Equations on a Time Lattice. Hamdam, N., and A. Uhlmann. 45 (1988) 605.
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- Quantum Restrictions on Measurement of Electromagnetic Field. Mensky, M. B. 45 (1988) 215.

Solid State Physics

- Spin-Phonon Interaction beyond the Limit of Spinwave Approximation. NGUYEN NGOC CHAN. 45 (1988) 404.
- Uphill-Diffusion of Phosphorus in Silicon. With 9 Figures. MASER, K. 45 (1988) 81.

Thermodynamics and Statistics

- Definition of the Degree of Order in Selforganization Processes. With 11 Figures. Klimontovich, Yu. L., and M. Bontz. 45 (1988) 340.
- Ionic Interactions in a Polarizable Dipolar Hard-Sphere Solvent. With 11 Figures. KRIENKE, H., and G. WEIGL. 45 (1988) 313.
- Thermodynamics of Systems of Non-Equilibrium Momentum Distribution. Lukács, B., and K. Martinás. 45 (1988) 102.
- Quantum Statistics of the Toda Oscillator in the Wigner Function Formalism. With 4 Figures. Vojta, G., and M. Vojta. 45 (1988) 614.

Turbulence

Modelling of Pressure-strain Correlation in Reynolds Stress Equations. With 1 Figure. Szablewski, W. 45 (1988) 129.

Unified Field Theory

- Topological Properties of String-Solutions of Einstein's Unified Field Theory. With 2 Figures. Kreisel, E. 45 (1988) 546.
- Sketch of a New 5-dimensional Projective Unified Field Theory Physical Predictions and Applications. SCHMUTZER, E. 45 (1988) 578.

